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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 10/700,491  | 11/05/2003  | Ali Amara            | 03495.0300                    | 6283             |
| 22852   | 7590        | 09/28/2007           |                               |                  |
| FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>901 NEW YORK AVENUE, NW<br>WASHINGTON, DC 20001-4413 |             |                      | EXAMINER<br>CHEN, STACY BROWN |                  |
|   |             |                      | ART UNIT                      | PAPER NUMBER     |
|   |             |                      | 1648                          |                  |
|   |             |                      | MAIL DATE                     | DELIVERY MODE    |
|   |             |                      | 09/28/2007                    | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/700,491

Applicant(s)

AMARA ET AL.

Examiner

Stacy B. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23,26-34,72,73,76,77,103 and 104 is/are pending in the application.
- 4a) Of the above claim(s) 72,73,76 and 77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23,26-31,103 and 104 is/are rejected.
- 7) ☒ Claim(s) 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 6, 2007 has been entered. Claims 23, 26-34, 72, 73, 76, 77, 103 and 104 are pending. Claims 72, 73, 76 and 77 are withdrawn from consideration being drawn to non-elected subject matter. Claims 23, 26-34, 103 and 104 are under examination. Claims 31, 103 and 104, drawn to the embodiment wherein the molecule that specifically binds to the DC-SIGN receptor is a recombinantly produced protein, is rejoined with the elected invention and linking claims.

### ***Response to Amendment***

2. The following rejections are withdrawn:
- The rejection of claims 29, 30, 84, 85 and 105 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention, is moot with respect to cancelled claims 84, 85 and 105, and withdrawn with respect to claims 29 and 30 in view of Applicant's amendment.
  - The rejection of claims 23, 26-30, 32-34, 78, 81-85, 87, 88, 89 and 105 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, is

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moot with respect to cancelled claims, and withdrawn with respect to pending claims in view of Applicant's amendment.

### ***Claims Summary***

3. The claims are drawn to a method of inhibiting binding of a Dengue virus to a human cell. The method comprises providing to the human cell a molecule that specifically binds to the DC-SIGN receptor. The molecule that binds DC-SIGN on the human cell is Dengue virus E glycoprotein, a recombinantly produced protein, or an antibody, more particularly a monoclonal antibody, even more particularly, a humanized antibody. When the molecule binds DC-SIGN, binding of the Dengue virus effector molecule to the DC-SIGN receptor on the human cell is inhibited (competitively).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23, 26-31, 103 and 104 are rejected under 35 U.S.C. 102(b) as being anticipated by Ivy *et al.* (US Patent 6,165,477, "Ivy"). The claims are summarized above. Ivy discloses the administration of recombinantly produced C-terminally truncated E glycoproteins from Dengue virus for inducing an immune response in a human host. Although Ivy does not disclose that the E glycoproteins bind DC-SIGN, it is expected that the glycoproteins will bind DC-SIGN because

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it is a property inherent to the Dengue virus E glycoprotein. Even without recognizing that the glycoproteins bind DC-SIGN, one would be practicing the claimed invention by practicing the invention described in Ivy. The method steps of the instant invention and the invention described in Ivy are the same: administration of the E glycoprotein to a human subject to inhibit Dengue virus infection/disease. Therefore, the invention is anticipated by Ivy..

### ***Conclusion***

5. Claims 32-34 are objected to for depending from rejected claims, but would otherwise be allowable if rewritten in independent form.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stacy B. Chen whose telephone number is 571-272-0896. The examiner can normally be reached on M-F (7:00-4:30). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Stacy B. Chen/ 9-19-2007  
Primary Examiner, TC1600